

AMATEUR RADIO

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

MAY
1949

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See Below and Page 14

To Commemorate the opening of new premises at 5a Melville St., Hawthorn, "HAM" RADIO have pleasure in offering this month Disposal Stocks at unheard of prices. Apart from many drastically cut bargains listed here, see page 14, for many other lines at prices that will truly astound you. Many of the items are in short supply and cannot be repeated, so order now and avoid disappointment.

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AMATEUR ADVISORY COMMITTEES

In all spheres of life there is some system of maintaining orderly conduct, and in this regard Amateur Radio is no exception. We could recall the statement by the noted American statesman Abraham Lincoln who once said, "Government of the people, by the people and for the people."

The Amateurs in Australia are able to govern themselves by the Amateur Advisory Committees which have been created in each State and under its control by the Postmaster General's Department and, as the name implies, the Committee functions in an advisory rather than a disciplinary capacity.

So that every licensed Amateur may have representation on this Committee its membership is composed of W.I.A. and non-W.I.A. personnel.

Each Committee, with the authority of the Department, whenever necessary, issues a notification to any licensee who has transgressed by a breach of the regulations or whose emissions are considered to be below the standard required by the Department. In cases where this notification is ignored the Committee refer the matter to the Department.

In instances where it is necessary to issue a "please explain" the recipient is asked to accept it in the "amateur" spirit and make endeavours to remedy the trouble by consulting the Handbook especially prepared for

EDITORIAL



the Amateur's guidance so that he may become more familiar with the regulations.

You, no doubt, will appreciate that the task of the observers is one requiring mature judgment and it should be understood that a "please explain" is not forwarded as a result of personal animosity. The Chairman, who is a Departmental representative, ensures that no such discrimination is shown by any member of the Committee towards any Amateur licensee.

The value of the activities of these Committees is fully appreciated in the work which they are doing in assisting to help maintain good operating practices, particularly in the heavily congested bands. Certain of this congestion is caused by key clicks and thumps, spurious emissions which include harmonic radiations and splatter. See that you, as an Amateur, are doing your share by emitting a good clean signal. An application of the golden rule will help clean up the bands.

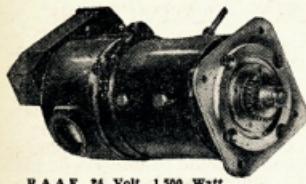
Besides the foregoing there are other breaches which are committed primarily through thoughtlessness. Amongst these are out of band operation and third party messages. These are viewed very seriously by the Department.

Amateur Radio has been in existence for the past 36 years — what a wonderful record to be proud of. Are you doing your share to maintain this good record? Play the game, please.

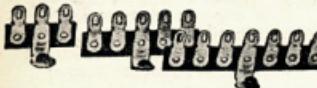
—Federal Executive.

Homecrafts

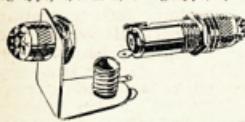
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lug type, 5/7 doz.; 6 lug type, 6/7 doz.; 7
lug type, 7/7 doz.; 8 lug type, 8/7 doz.



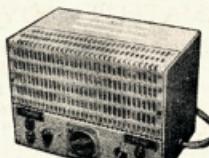
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Using the BC375E Transmitter Coil Units

BY J. DUNCAN,* VK3VZ

The BC375E Transmitter was used in great numbers during the war for communication between Liberator aircraft and ground stations, and for various other jobs where the U.S.A. Army required a medium power transmitter with an input to the power amplifier of about 150 watts.

Frequency changing was accomplished by means of plug in coil units, which contained the necessary condensers and inductances for coverage between 150 and 12,500 Kc. and it is these plug in coil units which we are to deal with in this article.

For those who are interested in the conversion of the whole transmitter in its entirety, it is suggested that they study the excellent article in "QST," December 1946, page 38.

Before the coil units are discussed it will be necessary to have a brief picture of the r.f. line-up of the transmitter.

The transmitter consists of only two stages on the r.f. side, a 211 master oscillator, driving another 211 as a power amplifier. This latter stage being modulated by Class B 211s. The r.f. side being shown in the functional diagram Fig. 1. The master oscillator is a plate tuned Hartley, the grid drive for the p.a. being obtained by tapping off the oscillator tank as shown, and feeding it via the blocking condenser to the p.a. grid. Neutralisation in the p.a. is achieved by taking another tap off the master oscillator tank, the same number of turns on the other side of the oscillator h.t. connection, and feeding it back to the plate of the p.a., neutralisation being achieved by adjustment of the variable condenser located in this lead. It will be seen that as h.t. is present on both the master oscillator and power amplifier tanks, they will be insulated from ground, which may be handy in some of the applications to which the coil units could be put.

COIL UNITS There are seven plug in coil units to each transmitter, the one covering the lower frequency range 200-500 Kc. not being of much use in our case. This unit is the TU26B, the other six units being numbered TU5B to TU10B respectively.

numbered 1005 to 1010 respectively. Each of these units is housed in a duralumin case 16 $\frac{1}{2}$ " long, 7-15/16" high, and 7-13/16" deep, finished in black crackle. This case is only used to protect the coil box when not in use, the inner case and front panel being removed by releasing snap fasteners.

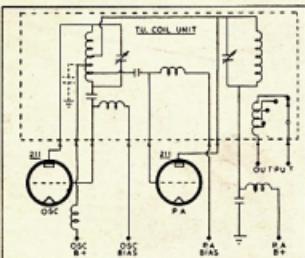
The inner case is divided into two equal sections, the left hand section housing the master oscillator inductance and condenser, and the right hand compartment, the power amplifier inductance, condenser, and ceramic tapping switch for adjustment of loading to the separate antenna loading unit. Also in

the master oscillator section is the neutralising condenser, r.f. chokes, and by-pass condensers.

The master oscillator condenser is constructed of Invar to reduce capacity changes due to temperature variations, is double spaced, and mounted on ceramic blocks—a beautiful condenser for a v.o.f. This condenser is driven through a ceramic flexible coupling, from a 50:1 worm drive. The drum dial is graduated 0 to 100 degrees for a complete revolution, and the scale on the condenser shaft 0 to 25 for a half revolution, giving 2,500 degrees for the full sweep of the condenser. This dial mechanism is spring loaded, has no backlash, and also has a dial lock incorporated.

The master oscillator inductance is tension wound on a ceramic ribbed former, and is fitted with a temperature compensating device inside the former. The neutralising condenser in this compartment is also double spaced, and insulated from the chassis, and is fitted with an insulated knurled disk, which can be set and locked, by removing the calibration chart on the front panel.

The various by-pass condensers in this section are all 3,000 volt types of excellent manufacture.



The right hand compartment contains the p.a. tank circuit and antenna switch, the condenser being double spaced, ceramic insulated, and in all units except the TU8B, which has a smaller value of capacitance, can be changed to split stator by cutting the stator bar on each side of the centre plate with a metal fretsaw. The centre stator plate can then be removed. The condenser is driven through a ceramic flexible coupler by a National type velvet vernier movement of about 5:1 ratio, this drive being fitted with a lock. The p.a. inductance is wound on a ribbed ceramic former, and has housed inside it the output coupling coil, which is taken through a heavily constructed ceramic tapping switch of six positions.

All connections to the remainder of the transmitter from the m.o. and p.a. compartments are brought out to a series of sockets located on an insulated strip running the full length of the coil box.

In the TU5B and TU6B Units frequency coverage is obtained in four and two steps respectively. This is done by switching fixed capacities across the master oscillator and power amplifier inductances. These ceramic switches being ganged by a metal bar. Each of the inductances switched into circuit in the master oscillator compartment, has a special temperature compensating condenser across it. These condensers consist of two round disks which act as the plates, the distance between them being varied by a bi-metal strip.

SUGGESTIONS FOR USE

FOR USE seen that the components are of particularly high quality and ideal for our use, and it is difficult to suggest any one particular use for a unit of this kind, as no two Amateurs think alike in that regard, however several ideas come to mind, and are given as a guide.

Firstly the unit can be dismantled for its components which are of very high quality and cannot be obtained elsewhere. The outer dural case only needs a front panel and you have a nice cabinet for receiver, v.f.o., etc. The ceramic coil forms, high voltage fixed condensers and switches all have places in the Ham shack.

Secondly by utilising the master oscillator condenser, and inductance in its existing position, and arranging a small chassis for oscillator and isolator tubes in the left hand compartment, removing all components in the right hand compartment, and installing a buffer amplifier and power supply, the unit can be made into a very nice v.f.o. If an external power supply is to be used, the inductance and condenser originally used for the p.a. could be used for the plate circuit of the buffer amplifier.

Because of the high quality of the condenser and inductance, the "Clapp" oscillator is particularly suited to this unit.

Fourthly the TU5B which has a range of 1.5 to 3 Mc. would make an ideal frequency meter and is discussed in detail later in the article. Because of its 2:1 frequency range, complete coverage of the short wave spectrum up to the highest harmonic audible on a receiver is obtainable.

To determine the bandspread, and capacities required to bring the various units into the Amateur bands, an oscillator and isolator stage was built up, the oscillator being the familiar electron coupled type. In all tests the frame of the oscillator condenser was grounded,

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Balwyn, Victoria.

and the taps on the inductance, other than the centre one, were removed. The remaining tap was used for the cathode. The following data was obtained, and it should be noted that the values of capacity do not apply to the "Clapp" oscillator, but only to the electron coupled circuit used.

TU5B.—Range 1.5-3 Mc. Osc. cond. 20-135 pF, p.a. cond. 20-156 pF.

Remarks.—This unit was not available for tests.

TU6B.—Range 3-4.5 Mc. in two steps; (1) 2.85-3.65 Mc., (2) 3.45-5.2 Mc. Osc. cond. 15-75 pF, p.a. cond. 19-116 pF.

Remarks.—No change in oscillator fixed capacities necessary, only necessary to disconnect fixed capacity connected to cathode tap of inductance.

Bandspread on 3.5 to 4 Mc.—925°.

TU7B.—Range 4.5-6.2 Mc. Osc. cond. 23-111 pF, p.a. cond. 19-116 pF.

Remarks.—Parallel capacity required to tune 3.5 Mc. band, 50 pF. zero drift, and 3-30 pF. air trimmer.

Bandspread on 3.5 to 4 Mc.—1471°.

TU8B.—Range 6.2-7.7 Mc. osc. cond. 14-66 pF, p.a. cond. 15-81 pF.

Remarks.—No alterations required, although 3-30 pF. air trimmer

could be added to bring 7 Mc. band to low end of scale, thereby increasing bandspread. P.A. cond. not suitable for alteration to split stator, (all other ranges suitable). Temperature stability excellent. Bandspread on 7 Mc. band—183°.

TU9B.—Range 7.7 to 10 Mc., osc. cond. 15-77 pF, p.a. cond. 19-116 pF.

Remarks.—Parallel capacity required to tune 7 Mc. band, 3-30 pF. air trimmer. Remove 400 pF. fixed condenser between cathode tap and ground.

Bandspread on 7 Mc. band—281°.

TU10B.—Range 10-12.5 Mc., osc. cond. 14-62 pF, p.a. cond. 19-116 pF.

Remarks.—Parallel capacity required to reach 7 Mc. band 100 pF. zero drift, and 3-30 air trimmer. Remove 400 pF. condenser from cathode tap to ground.

Bandspread on 7 Mc. band—512°.

General.—The value of the neutralising condenser in all ranges is 8-26 pF.

Any of the v.f.o. circuits described in "Amateur Radio" could be built into one of these units, and if the normal electron coupled oscillator circuit is used a suitable circuit would be the one described in "Amateur Radio," August 1947, which gives details of the method for locating the cathode tap for voltage

stability, quite an important adjustment in an oscillator of this type. If a "Clapp" oscillator is used some adjustment may be necessary to the inductance to locate the Amateur bands correctly, as it is not permissible to use fixed condensers across the inductance in this oscillator.

All screws in these units have been fixed in with an adhesive, which can be softened with paint thinner thereby making them easy to remove.

The condenser which it is necessary to remove, between centre tap and ground, is shown dotted in Fig. 1. Obviously with one side of the inductance grounded, this capacity will be connected between the cathode tap and ground of the electron coupled oscillator.

Finally the following articles describing various conversions possible with these units, are listed below.

1. "What about the BC375E?" "QST," December 1946, page 38.

2. "A surplus parts Bandswitching Transmitter," "QST," September 1948, page 11; Part 2, "QST," October 1948.

3. "Transistor V.F.O. Unit," Short Wave magazine, June 1948, page 235.

4. "TU5B as Frequency-checked V.F.O. Driver," Short Wave magazine, page 464.

5. "TU5B as TU5B," Short Wave Magazine, November 1948, page 624.



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A High Stability Frequency Meter

BY R. HIGGINBOTHAM,® VK3RN

One of the most essential pieces of equipment necessary in the Amateur shack, and one which is required by the P.M.G., is a good, stable frequency meter. With the great popularity of v.f.o. operation these days, an accurate means of checking the frequency transmitted is imperative, and even where crystal control is used, it is necessary to check the frequency of crystals to see that they fall within the Amateur bands. It is also a great help in finding a station who finds it necessary to change frequency. Imagine the saving in time if you can use your frequency meter to narrow down the field of search to a few kilocycles, instead of searching aimlessly up and down the band.

Although this article is written around one of the BC375E coil units described elsewhere in this magazine, with a little extra work and careful adjustments, especially that of temperature compensation, a similar frequency meter could be built up using some of those good parts that are lying around the shack.

After viewing the TU5B tuning unit from the BC375E, the idea came to mind that a stable frequency meter could be constructed, using the oscillator tuning components, and with the dial capable of being read to one part in 2,500, quite a high degree of accuracy could be obtained, especially as the 1.5 to 3 Mc. range is covered in four steps. Further thought revealed that by removing all the p.a. tuning parts, there would be sufficient room in the p.a. compartment to include the necessary valves and power supply.

Upon laying out the parts it was found that there was ample room, so it was decided to add an electron eye and crystal, also a means of modulation, to make the frequency meter more versatile. These two units were added, and during the process of testing, it was realised that the electron eye only gave one check point over the whole range of the meter, which was 2,500 Kc. with the disposals crystal used. As the meter had four switched ranges, this meant that some of the ranges would not have a check point.

The system used in a commercial frequency meter came to mind. Why not replace the electron eye with a straight crystal oscillator? This was done, and resulted in a large number of check points being obtained throughout the four ranges from 1.5 to 3 Mc., due to the beating of the fundamental and harmonics of the two oscillators.

CIRCUIT The final set-up is shown in the schematic diagram. A 6SJ7 is used as an electron coupled oscillator, utilising the original capacity and inductance, dial movement, etc. The output from this oscillator feeds to the output terminal, and also the grid of the 6K8 mixer. The triode section of the 6K8 is connected in a conventional

crystal oscillator circuit, with a slug tuned broadcast coil ("Aegis" osc. M11 with plate coil removed) in the plate circuit of the oscillator tuned to the frequency of the crystal, in this case 2,500 Kc. This crystal was used simply because it was easier to get than a 1,000 Kc. crystal, and apart from the disadvantage of not providing band edge markers, made the job just as well, and at much less cost.

The output of the 6K8 mixer feeds into a triode connected 6SJ7 which serves the dual purpose of audio amplifier for normal frequency meter operation, and audio oscillator for modulation purposes.

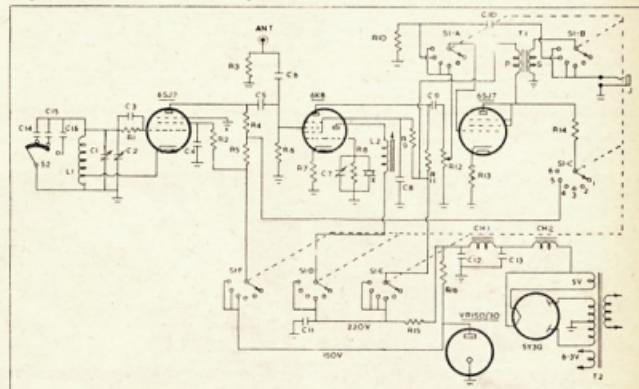
A function switch is used to change the circuit for the functions required, and consists of three banks of two poles with six positions. Although a six position switch is used to correspond with similar markings on the front panel of the old antenna coupling switch only four are used. The six positions

operate as follows:—

1. Warm up—all filaments on.
2. Warm up—all filaments on.
3. Crystal—Crystal oscillator only.
4. Operate—E.C.O. only.
5. Modulate—E.C.O. amplitude modulated by 6SJ7 audio oscillator.
6. Check—E.C.O. and Crystal on 6SJ7 connected as audio amplifier.

The transformer T1 is an ordinary 3 : 1 interstage job, which happened to be on hand. If the audio oscillator fails to work when switched to position 5, reverse the connections to either the primary or secondary. The frequency of the audio note is controlled by the condenser C10, smaller values raising the pitch.

The power supply is conventional, with the voltage regulator controlling the voltage to all essential points. A two section filter with high value of filter capacity ensures that the note will be clean.



C1—Original osc. tuning condenser.

C2—5 pF. variable (Corrector).

C3—15 pF.

C4—0.001 uF.

C5—50 pF.

C6—25 pF.

C7—15 pF. variable trimmer.

C8—0.1 uF.

C9—0.02 uF.

C10—0.01 uF.

C11—0.1 uF.

C12, C13—16 uF. electrolytics.

C14, C15, C16—Existing condensers in coil unit.

R1—250,000 ohm watt.

R2—10,000 ohm $\frac{1}{2}$ watt.

R3—5,000 ohm $\frac{1}{2}$ watt.

R4—50,000 ohm $\frac{1}{2}$ watt.

R5—20,000 ohm $\frac{1}{2}$ watt.

R6—500,000 ohm $\frac{1}{2}$ watt.

R7—150 ohm $\frac{1}{2}$ watt.

R8—1 megohm $\frac{1}{2}$ watt.

R9—10,000 ohm $\frac{1}{2}$ watt.

R10—50,000 ohm $\frac{1}{2}$ watt.

R11—50,000 ohm $\frac{1}{2}$ watt.

R12—500,000 ohms 1 watt.

R13—1,000 ohms 1 watt.

R14—20,000 ohm $\frac{1}{2}$ watt.

R15—2,500 ohm $\frac{1}{2}$ watt.

R16—7,500 ohm $\frac{1}{2}$ watt.

L1—Original oscillator coil.

L2—Aegis broadcast osc. coil (M11) with plate winding removed.

CH1, CH2—6 H. 60 Ma. Rola chokes.

T1—Standard audio transformer.

T2—385—0—385 v., 60 Ma., 5v., 6.3 v. transformer.

J—Phone jack.

SW1—A-F₃ bank, 2 pole, 6 position switch.

SW2—Existing band switch in coil unit.

X—Crystal, 2.5 Mc.

TEMPERATURE COMPENSATION The present oscillator inductance has an inductance loop inside the former which is varied axially by two metal rods, one constructed of a metal having a low co-efficient of expansion, and the other a high co-efficient of expansion, thereby varying the inductance with a change of temperature.

A small additional amount of temperature compensation was found necessary, and a negative co-efficient condenser was connected across the tuned circuit. A suitable condenser is made by Ducon, and is a ceramic 3-30 pF. type, with the plates silver sprayed onto the ceramic. The type should be the N500, the one marked N.P.O. is a zero drift and is not suitable. The capacity of the negative co-efficient condenser should be increased in steps, and the lumped capacity decreased in the remainder of the circuit, until correct compensation is obtained. If the above type of condenser is not obtainable, a fixed ceramic of 50 or 100 pF. (N750) in series with an air trimmer will also serve the purpose.

The e.c.o. and crystal should be made to beat preferably on about the 1.875 Mc. check point, and temperature compensation adjusted there, this will ensure that the greatest stability will be in the Amateur bands where it is most needed.

A large number of check points are audible throughout the range 1.5 to 3 Mc. covered by the meter, but only the

main ones are used. When the meter is calibrated they should be noted in a similar manner to the BC221 Frequency Meter.

CONSTRUCTION All components in the p.a. section were removed, and also those in the oscillator compartment except the variable condenser, inductance, range switch, and temperature compensated condensers controlled by this switch. Some of the screws holding the components are glued into position and can be removed by softening the adhesive with paint thinner.

The height of the new chassis fitted to the p.a. section must be governed by the components used. In the Writer's case the function switch (which replaced the antenna output switch) was mounted, and the chassis then placed in position so that there was sufficient clearance between the two. Another point to watch is that there is still enough room above the chassis for the valves. Metal valves were used for obvious reasons. The VR150/30 regulator tube rises above the rear wall by about half an inch, so the perforated metal cover was cut to allow the valve to project. When the unit is placed in its case there is still clearance between the top of the regulator and the case.

The oscillator valve socket is mounted on the partition wall, and the valve protrudes above the chassis in the old p.a. compartment. The 6K8, 6SJ7, and crystal are mounted vertically in front

of the power transformer, with the regulator tube and rectifier to the right of the power transformer, and in front of the latter two tubes are placed the audio transformer and the crystal oscillator coil.

The antenna terminal is mounted at the top centre of the front panel, with the phone jack in line at the bottom of the panel. The corrector condenser is located in the bottom of the oscillator section, this condenser being used to bring the crystal check points to the predetermined dial reading.

CALIBRATION Calibrating the frequency meter is best done by using a frequency divider giving 10 Kc. points. If the output of the frequency meter is tuned in on a receiver at five times the fundamental, 7.5 to 15 Mc., and beat against the 10 Kc. points at this frequency, readings will be obtained every 2 Kc. on the fundamental. A calibration book can then be drawn up, and the crystal check points noted at the bottom of each page.

Alternatively a graph could be prepared covering the four ranges, and the crystal check point readings listed.

With due care in construction and adjustment of this frequency meter, extremely accurate results can be obtained, which will be more than ample for our requirements, and you will have virtually "the poor man's Bendix."

The writer wishes to thank Mr. J. Duncan (VK3VZ) and Mr. J. Groves for their assistance and suggestions in the conversion of this tuning unit.

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IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

MAY, 1949

The accompanying charts have been prepared by the Ionospheric Prediction Service of the Commonwealth Observatory. The first set of the series was published in the November, 1948, issue of this magazine, together with an article explaining the nature of the forecasts and how to use them. Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

These charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

The forecasts have actually been prepared for point-to-point circuits between either Canberra or Perth and the overseas terminals mentioned in the above table. It is, however, to be expected that the charts will provide an approximate indication of ionospheric conditions for all Amateur contacts from South-Eastern Australia and from Western Australia to the various world zones. No forecasts are given from Perth to zones Z2 and Z4 for the current month. Chart P-Z2 would be essentially similar to P-Z1 while chart P-Z4 would be unreliable due to auroral activity in high northern latitudes.

USE OF CHARTS

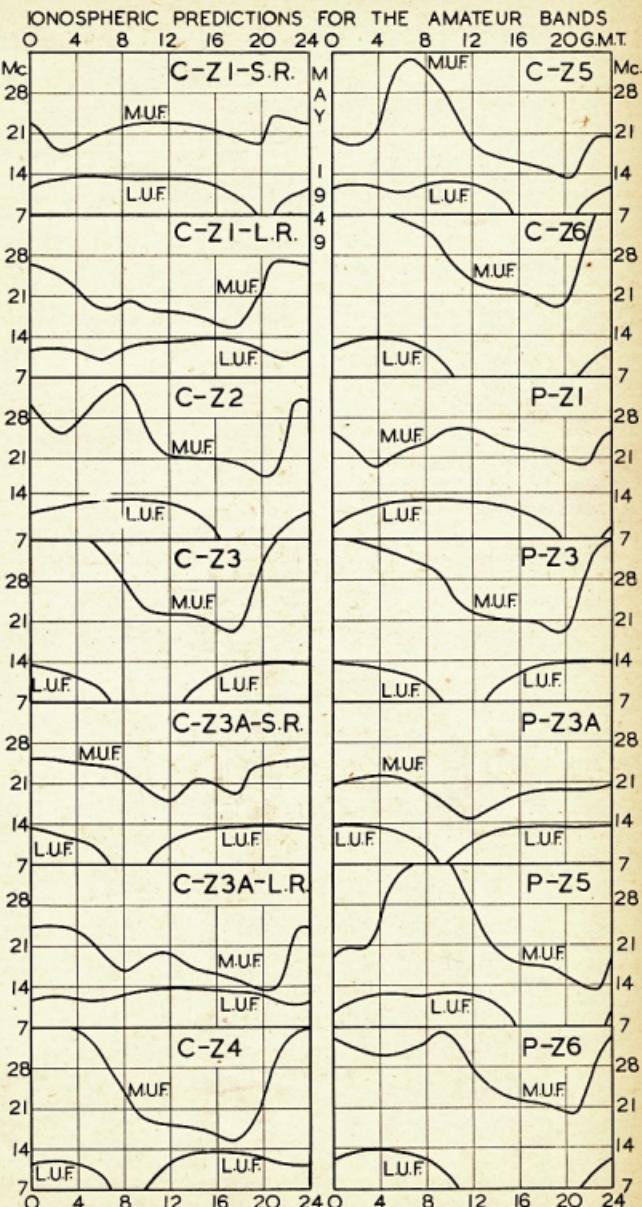
All that is necessary in using the charts is to select a time (G.M.T.) during which a specified Amateur band frequency is below the maximum usable frequency (m.u.f.) of the F region of the ionosphere but above the lowest useful frequency (l.u.f.) for the desired contact. In two cases, zones 1 and 3a, it is necessary to consult both the short-route (s.r.) chart and the following long-route (l.r.) chart.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular answers to the following questions on the Canberra-Far East circuit for May would be useful:—

- Was the 28 Mc. band available from a few hours before midnight to a few hours before noon G.M.T.?
- Were conditions noisy on 14 Mc. for several hours in the early morning, but good for the rest of the Greenwich day?
- Were best conditions experienced on 7 Mc. from 11 hours to 21 hours G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the month.



Results of Frequency Measuring Contests

The following are the results of the Frequency Measuring Contest, held on 25th March and 1st April, 1949.

1st Prize—VK3BB A. E. Budge, 33 Papyrus Street, Morewell, Vic. (£3 order for radio gear).

2nd Prize—VK3YS F. G. Ball, 62 Shannon Street, Box Hill (£2 order for radio gear).

Special Prize for best use of home-built equipment—VK3ACM C. R. Mackenzie, 34 Orange Gve. Camberwell.

The full list of entrants, in order of accuracy are appended, the second figure being the average error in cycles per second. The figure in brackets is the number of frequencies submitted by the Competitor.

As was expected commercial frequency meters were very much to the fore, B2212 being used by competitors in 1st, 2nd, 3rd, 7th, 8th, 10th, and 15th places. VK2RA used a commercial permability tuned v.f.o. which was the 1st. unit of the AT13 transmitter, and calibrated it against a 200 Kc. crystal oscillator. VK2QL hand calibrated an SCR211 and used it to win 5th place.

The most meritorious use of home-built equipment was judged to be VK3ACM, whose equipment was a home-built v.f.o. (e.c.o. 6537, 1852 untuned class A amplifier, with a regulated power supply). Ten entries were submitted by this entrant, and his average error was 189 c/s.

VK5RR had an unusual set up, to quote: "Home constructed receiver, permanently tuned to 5KA at 1200 Kc., single tube v.f.o. with L/C constants at

50 Kc., adjusted exactly to this frequency by zero beat with 5KA at its 24th harmonic, and a heterodyne frequency meter on the broadcast band which can be corrected at any time by zero beat with 5KA, the 6th harmonic of which is 7200 Kc., with check points by means of the 50 Kc. standard at 7150, 7100, 7050, and 7000 Kc."

The remaining entrants' home-built equipment in brief was:—

VK2GU.—Home-built frequency meter, with 200 Kc. crystal, and 20 Kc. multi-vibrator.

VK3XB.—Home constructed frequency meter using single 1D8GT with pentode as 3.5 Mc. band osc., triode audio amp.

VK2ZC.—100 Kc. oscillator, 10 Kc. multi-vibrator, and calibrated b.f.o. oscillator to interpolate 100 Kc. spots.

VK3ADF and **VK3ADG** used Class C Wavemeters. VK3GS used a BC348 receiver calibrated against 100 Kc. crystal in Hammurlund Frequency Oscillator Unit.

As will be seen from the results, 15 of the 17 entrants obtained an accuracy of under 400 cycles which is excellent measuring, and the entry of VK6DD who measured all 10 frequencies and had an error of only 286 cycles was remarkable.

For the information of entrants, the frequencies given by the Standard Frequency Service are appended, and the Judges wish to thank all concerned for their entries, and especially to the Measuring Service which co-operated so fully.

DETAILED RESULTS OF CONTEST

Call Sign	Error in c/s.	Frequencies Submitted
1—VK3BB	121	(7)
2—VK3YS	141	(5)
3—VK3PW	146	(5)
4—VK2RA	157	(8)
5—VK2QL	170	(5)
6—VK3ACM	189	(10)
7—VK22B	197	(10)
8—VK3AWW	220	(4)
9—VK5RR	235	(5)
10—VK6DD	286	(10)
11—VK2GU	287	(10)
12—VK3ADF	294	(6)
13—VK3XB	310	(6)
14—VK3GS	331	(5)
15—L. D. Sykes	393	(10)
16—VK2ZC	646	(4)
17—VK3ADG	1176	(10)

OFFICIAL FREQUENCIES

1—7003.744 Kc.
2—7049.700 Kc.
3—7084.065 Kc. (7093.826 Kc.)
4—7132.320 Kc. (7132.261 Kc.)
5—7163.120 Kc. (7163.091 Kc.)
6—7024.810 Kc.
7—7066.240 Kc. (7066.454 Kc.)
8—7107.520 Kc. (7107.391 Kc.)
9—7144.525 Kc. (7144.695 Kc.)
10—7192.878 Kc. (7192.869 Kc.)

The frequencies submitted by the winning entrant are in brackets alongside each Official Frequency.

C.W. Ratings for Several Radiotron Receiving Valves

Valve	Max. Plate Volts	Max. Screen Volts	Max. Grid Volts	Max. Plate Ma.	Max. Screen Ma.	Grid (Note 1)	Max. Plate (watts)	Max. Screen (watts)	Power Output (watts)	Max. Freq. in Mc.	Grid- Screen Factor (Note 2)	Grid- Screen Factor (Note 3) (approx.)
6AG7	375	250	—75	30	9	5	9	1.5	7.5	30	22	
6AK6	375	250	—100	15	4	3	3.5	1	4	60	9.5	
6C4	300	—	—100	25	—	8	5	—	5.5	60	18	
6F6	400	275	—100	50	11	5	12.5	3	14	30	7	
6L6	400	300	—125	100	12	5	21	3.5	28	30	8	
6N7	350	—	—100	30†	—	5‡	5.5†	—	14.5§	30	35	
6V6GT	350	250	—100	47	7	5	8	2	11	30	9	

Note 1: 100,000 ohms maximum grid resistor.

„ 2: Based on 70% plate efficiency.

„ 3: Maximum frequency for full power output and input.

† Per Plate.

‡ Per Grid.

§ Total.

Publication of this data should not be taken as an indication that all types mentioned are available from stock. Amateurs possessing any of these types will find the above chart a useful guide to maximum operating conditions. It should be noted that metal tube ratings given above do not necessarily apply to G and GT equivalents.—"Radiotronics," March-April, 1949.

VK'S ABROAD

Recently we have received letters from two VK3s who are at present in Great Britain. As their letters are interesting, it is thought that readers would be interested to know what is going on in other parts of the world.

The first is from Elgar Trebarne (VK3AFQ, now G3CST). He says: "I was very pleased to receive the invitation to attend the 6th Annual Exhibition of the R.C.M.F. Exhibitions, Fairs, and Conferences are very fashionable in London and one is continually amazed at the splendid display of components, especially at this show at the Grosvenor. There has been great emphasis on technical components from perspex lenses for the optical enlargement of the c.r.t. screen to high capacity electrolytics for e.h.t. supplies.

"For the Amateur a very wide range of co-axial cables, modulation equipment, transmitting condensers and other wanted components. There seems to be a score or more makers of loud speakers from 2½" diameter to the huge so called reflexed sound projectors. And there are just as many makes of pick-ups to stimulate these speakers.

"An interesting development of the thermistor is the 'Brimister'—a current surge resistor. The large negative temperature co-efficient characteristics of this device are exploited in this new component, one type of which has a resistance of 3,000 ohms at 20°C. and a resistance of 200 ohms when passing 0.1 Amp. Miniature components were represented, perhaps, not as much as I would have expected. There seems a great need for standardisation, espec-

ially with tubes—there is not only a multiplicity of almost comparable types, but the nomenclature seems to be designed with the express purpose of foxing the young player.

"Please convey my congratulations to 'Amateur Radio'—the journal is really first-class these days, especially the technical articles on the conversion of service equipment to Amateur use."

The second is from W. H. Algar who had requested some W.I.A. information.

"GREMLIN"

In the twelve months that this feature has been absent from the columns of "A.R.", signals emanating from Amateur stations, sloppy operating, the misuse of v.f.o.s, etc., have gone from bad to worse.

Many requests for the return of "Gremlin" have been received by the Magazine Committee, and it has been unfortunate that the "Gremlin" has not been in a position to carry on with his good work.

However with the June issue this feature will re-commence. It will be written by a new "Gremlin," but will appear under a different name. The person responsible is one I have known for many years, whose interest is solely for the betterment of Ham Radio. He is an active transmitting member on all bands, and has been for many years.

—THOMAS D. HOGAN, Editor.

REVIEW

We have received from R. H. Cunningham & Co. a copy of the new 1949 Eddystone Component Catalogue, which as usual offers a most attractive range of components to the Ham. In addition to the lines already available, there are quite a few new lines which will have an immediate appeal to experimenters and these include Cat. No. 678 Modulation level indicator and field strength meter. Cat. No. 717 145 Mc. beam aerial kit and No. 709 145 Mc. tuning unit. Cat. No. 690 is a crystal calibrator containing two G.E. 1000 and 100 Kc. vacuum mounted crystals and is ideal for spotting down to 60 Mc.

The range of transmitting and receiving condensers has been expanded and offers many useful types for application up to 500 Mc. and above.

Copies of this Catalogue are available immediately from authorised Eddy-stone distributors.

His letter reads: "Thank you very much for the pamphlet describing the activities of the Victorian Division of the W.I.A. It is very much appreciated as the Hams here are very interested in Amateur Radio in Australia.

"Since I've been in Coventry—since January—I've made quite a lot of good friends amongst the Hams here, and have joined the local radio society—Coventry A.R.S. They are a very enthusiastic and energetic body, holding their meetings every second week. I have recently taken out a licence for this country and hope to be on the air as soon as I am allotted a call sign."

LOCATION of RADIO RANGES

The location of the Radio Ranges mentioned in the article, "What No Beacons," in March "A.R." may not be known to readers.

We are therefore indebted to Mr. F. Hanham (VK3KZ) for supplying the following information:—

AD	33.8	Parafield, Adelaide.
AS	33.8	Alice Springs, N.T.
BN	33.3	Archerfield, Brisbane.
CS	33.3	Cairns, Queensland.
CB	33.8	Canberra.
DW	33.8	Daly Waters, N.T.
DN	33.3	Darwin, N.T.
ML	33.8	Essendon, Melbourne.
TV	33.8	Garbutt, Townsville, Q.
PH	33.8	Guildford, Perth.
HB	33.8	Cambridge, Hobart.
HK	33.3	Holbrook, N.S.W.
KM	33.8	Kempsey, N.S.W.
MN	33.3	Mangalore, Victoria.
SY	33.3	Mascot, Sydney.
NH	33.3	Nhill, Victoria.
LT	33.3	Western Junction, Tas.

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FEDERAL, QSL and



DIVISIONAL NOTES

Federal President.—W. R. Gronow, VK3WG; Federal Secretary.—W. T. S. Mitchell, VK3UM, Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

Secretary.—Dick Dow, VK3RPR, Box 1734, G.P.O., Sydney.
Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor: H. F. Treherne, VK2BM, 5 Wattle St., Rosewood.

Zone Correspondents.—North Coast and Tablelands: P. A. H. Alexander, VK2PA, Hill St., Port Macquarie; Newcastle: E. J. Baker, VK2PF, 13 Skelton St., Hamilton, Newcastle; Coastfield and Lakes: H. Hawkins, VK27L, 27 Comfort Ave., Cessnock; Western: G. J. Russell, VK2OJ, 116 Bogey St., Nymagee, South Coast: G. J. Tabbal, 100 R. H. Raynor, VK2DO, 42 Pettit St., Yass; Southern: E. N. Arnold, VK2OJ, 673 Forrest Hill Ave., Albury; Western Suburbs: A. C. Pearce, VK2AHB, 49 Harrabrook Ave., Five Docks; Eastern Suburbs: H. Ken, VK2OJ, No. 4 Flat, 17a Newell St., Bondi; North Sydney: L. J. Cuffe, VK2AM, 199 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton, South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St., and Marine Pde., Maroubra.

VICTORIA

Secretary.—C. C. Quinn, VK3WQ; Administrative Sub-Editor.—D. Cross, Law Court Chambers, 191 Queen St., Melbourne, C.I.

Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents.—North Western: B. R. Mann, VK3WM, Quambatook; Western: C. C. Waring, VK3YW, 12 Stkens St., Stawell; South Western: B. S. Miller, VK3WV, 17a Riddell St., North Ballarat; North Eastern: A. Miller, VK3ABG, "Erinvale" Avenel; Far North-Western Zone: Harry Dobbyn, VK3MF, 42 Walnut Ave., Mildura; Eastern Zone: J. D. Chilver, VK3DI, 20 Smith St., Leongatha.

FEDERAL

DX C.C. LISTING

PHONE

	Zone	Countries
VK3JD (26)	33	121
VK6RU (27)	37	111
VK3HZ (28)	37	108
VK6KW (34)	36	105
VK3IG (37)	100	

C.W.

	Zone	Countries
VK3CN (3)	40	126
VK3YV (12)	39	131
VK3KZ (13)	39	121
VK3EK (14)	39	122
VK4EL (24)	39	120
VK2EO (7)	40	116
VK1DA (20)	38	113
VK3QI (19)	40	112
VK4FH (21)	38	106
VK3KB (31)	104	

New Member—

	OPEN	Zone	Countries
VK4JR (85)	34	102	

ZONES

	Countries
VK2DI (2)	40
VK3HZ (28)	10
VK6RU (27)	158
VK6GHU (11)	37
VK3KX (1)	140
VK3HZ (28)	136
VK3JE (4)	38
VK3ZB (18)	39
VK3KX (1)	133
VK4EL (16)	122
VK4HR (9)	38
VK6KW (19)	126
VK4EL (16)	125
VK4RC (86)	39
VK4RC (86)	120

100

Endorsements in the form of a sticker are now being issued for every additional 20 countries verified above the 100 required for the Certificate.

COUNTRIES LIST

In line with our note last month, it is understood that ex-D. A. numbers are now being issued with DL calls which will be DL1, 2, 3, 4, 5, 6, 7, 8, 9, in addition to the Occupation Forces prefixes as listed last month.

Substitute for Germany—DL in lieu of D (DA). For Palau Islands and add prefix K09. For the Federated Volcanoes add prefix KG6. Add New Country—Heard Island (89) VK1.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST, 50.4 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST 7196 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0930 hours EST simultaneously on 3750 Kc., 7196 Kc., 14,342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly and the time is announced during Sunday broadcasts. 7010 Kc. is used from 1000 to 1030 hours each Sunday as VK4WI query service to 4WI.

VK5WI.—Sundays, 1000 hours SAST on 7196 Kc. Frequency checks are given by VK5WI on Friday evenings on the 7 and 14 Mc. bands.

VK6WI.—Sat. 2 p.m. Sun. 9.30 a.m. W.A.S.T. on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 0830 hours EST on 7174 Kc. No frequency checks available.

QUEENSLAND

Secretary.—W. L. Stevens, VK4TB, Box 638J, G.P.O., Brisbane.

Meeting Night.—Last Friday in each month at the State Service Building, Elizabeth St., City.

Divisional Sub-Editor: F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

Secretary.—E. A. Barber, VK5MD, Box 1234K, G.P.O., Adelaide.

Meeting Night.—Second Tuesday of each month at 7 Waymouth St., Adelaide.

Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

Secretary.—W. E. Coxon, VK6AG, 7 Howard St., Perth.

Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.

Meeting Night.—Watch the Monthly Bulletin.

Divisional Sub-Editor.—VK6WT, D. Couch, May Street, Watermans Bay, W. Australia.

TASMANIA

Secretary.—J. Brown, VK7BJ, 12 Thirza St., New Town, Telephone: W 1328.

Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.

Divisional Sub-Editor.—Capt. E. J. Cruise, VK7EJ, Anglesea Barracks, Hobart.

Northern Correspondent.—C. P. Wright, VK7LZ, 3 Knight St., Launceston.

FREQUENCY ALLOCATIONS

Following representations to the P.M.G.'s Department by the Federal Executive, the following changes have been made with effect as from the 1st January, 1949. Two types of emission have been added, namely, n.f.m. (narrow band frequency modulation) type 6F8, and a.s.c.c. (single sideband suppressed carrier) type A3a. A sub-allocation has been made for the old 1345 to 1425 Mc. band, which was the All Australian City allocation of 1315 to 1300 Mc. The list below is the up-to-date one for Australian Amateurs:—

3.5 to	3.8 Mc.—A1, 3, 2a, 6F3.
7.0 to	7.2 Mc.—A1, 3, 2a, 6F3.
14.0 to	14.4 Mc.—A1, 3, 2a, 6F3.
25.96 to	27.23 Mc.—A1, 3, FM.
28.0 to	34.0 Mc.—A1, 3, 2a, 6F3.
50.0 to	51.0 Mc.—A1, 3, FM.
144 to	148 Mc.—A1, 2, 3, FM, Pulse.
288 to	296 Mc.—A1, 2, 3, FM, Pulse.
576 to	585 Mc.—A1, 2, 3, FM, Pulse.
1215 to	1300 Mc.—A1, 2, 3, FM, Pulse.
2300 to	2400 Mc.—A1, 2, 3, FM, Pulse.
5650 to	5750 Mc.—A1, 2, 3, FM, Pulse.
16000 to	16500 Mc.—A1, 2, 3, FM, Pulse.
21000 to	22000 Mc.—A1, 2, 3, FM, Pulse.
30000 Mc. and higher—	A1, 2, 3, FM, Pulse.

Note.—6F8 emission represents a maximum deviation from the quiescent frequency of plus or minus 3 Kc.

THIRD PARTY TRAFFIC

It has been brought to our notice by officers of the P.M.G. Department that several deliberate breaches of Regulation 33, which deals with the handling of third party messages, have recently occurred. The P.M.G. Department has taken a very serious view of such contraventions and have indicated that any further cases will be severely dealt with. All Amateurs will receive notification of this matter in the Circular issued by the Department on the handling of third party messages. Also enclosed will be found Amendment No. 2 to the Handbook for the Guidance of Amateur Operators, January, 1948.

SLOW MORSE TRANSMISSIONS

Reports on these transmissions from Amateurs, would-be Amateurs and a.w.l.s. would be welcomed by Federal Executive. Drop the Federal Secretary a note, and let him have your comments. The

HEARD ISLAND REPORT

It is reported from Heard Island by VK1FVE that early in February (presumably the first week) on his arrival, he logged the 50 Mc. signals from VK4BT at 1800 WLS in QSO with another station. Unfortunately Arthur did not have a transmitter on the air at this time and that him. It appears that early contacts with Heard Island may be expected, especially from VK6.

From VK1VU, appears to have the urge for the DX, judging by the cards coming to light for him, and the fact that he worked some 200 odd DX stations in the first two months of operation representing some 30 odd countries.

P.M.G. AMATEUR CALL BOOK

Due to difficulties in arranging printing, the Call Book may not be available before June. We will endeavour to obtain the latest correction lists until it is released.

FEDERAL CONVENTION

The 19th Annual Federal Convention, held over the Easter holidays, was a success and many resolutions were considered—in all 33 Agenda Items and 25 General Business items. A summary of the various motions and the result will be published in the next issue of VK.

The President's report indicated that a progressive year had gone by, and judging by the amount of work ahead as a result of the deliberations, another busy year is forecast.

Delegates who attended on behalf of the various Divisions were Mr. John Moye (24), N.S.W.; Mr. Bob Cumming (24), Qld.; Mr. M. G. MacGregor (42U), Qld.; Mr. "Doc" Barber (5MD) and Mr. Hal Austin (5AW), S.A.; Mr. George Moss (8GM), W.A.; Mr. Joe Brown (7BJ), Tas.; and Federal Executive Officers: Federal President Mr. Bill Gronow (3WG), Federal Vice-President Mr. George Glover (3AG), Federal Secretary



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works twenty when possible. 2ASB, 2XO and 2PA busy with arrangements for Urunga Town Convention, they hope the day will be a success. A number of the same members are active on 19 and 20.

COAST FIELD DAY

2RU still active on 40 Mc. may break out on lower freqs., his rig finished. 2AEE picked up 4041F, makes him 118 countries—88 zones post-war; report Europeans good in mornings from 6 a.m. onwards. 2AMU running 12 watts on 50 Mc. worked 2GUD in Canberra, 28 QSOs on 40 phone as usual. 2AOI at the Entrance is going but no news of his activities. 2OO doesn't seem so active these days. No news of 2TY. 2VU going again on 50 Mc. after some re-building. Mailand still on 40 Mc. in the Hill. 2WZ using 2FZ or 3MK this month. 2EF going using some new and "Clapp" oscillator. 2EKK has worked New Hampshire on 10 phone, only needs Delaware for W.A.S. Max using eight half waves, four above four more below. The States up to 9 p.m. on 10 metres. 2TY still running and has been on in about six weeks. 2ADT doing some band-hopping from 80 metres to 144 Mc., a new rig is being used w/ 6 with good results.

WESTERN ZONE

2BT active on 40 Mc. 2NU, 2WV getting his share of DX, collects 2V1A1D. Macquarie Island Zone Officer 2QA returned from holidays after doing the rounds of the shack. Recommends the hospitality of 2ABJ, put on two stones in Muswellbrook nice work. 2EEL 2XK active with a new tx. 2II 2BZ active with a new rx. 2EJ 2ABK active, put near the microphone, Rod had it in both hands. 2YN been experimenting 2AQG. Bill made a quick W.A.C. to show how to do it. 2DKM been heard on 40. 2ACT still has farming and no prospects on an ordinary radio to him. 2AII, 2AII and 2WV made the Northern Towns' Convention at Urunga, they were invited to investigate the propagation properties of Lazy "Nim" Don 2AIIK is back again in Orange, was heard over Easter. 2JG active on 40, likewise 2DIIK with a nice drop of noise. 2II with family and away on holidays. 2EJ 2ABK active on 40. 2GZ active on the air soon. 2AFV had the bad luck to get across 1,000 volts. 2LY been doing a spot of recording on 50 Mc. for the W.I.A. v.h.f. broadcast.

2LZ inactive, spends a lot of time star gazing these days. 2EF on 144 and getting down to town

from a badly shielded location. 2HZ been celebrating a happy event, has 167 up post-war. 2FH been talking compression with 2G8, so looks like some changes at St. Marys. 2AFV building new gear, 2EFV is going on 144 Mc. with a new rig using 144, 2AOP back in Katonah but not very active as yet.

SOUTH COAST AND SOUTHERN TABLELANDS

During the month many of the same stations have been contacted, and think honours go to 2OW for the improvements effected to his equipment and signal. Much alterations to 2OW, result old No. 11 exciter was replaced by a v.o.f. using "Clapp" and two class A oscillator stages, followed by a v.o.f. and a 6V6. A 6V6 crystal insert completes the line up and the effect is very pleasing. 2MN passed through Yarram on to the R.A.N. in Sydney. Has made a change of QTH, now at Young. Used a 2AT5/ARS, with a v.o.f. 2AJP has been run to 2000 and has some fine gear operating. v.o.f.-6V6-607-803 suppressor modulated by 1003-6L7-76-6V6, Dynamic mike 2OY of Goulburn has completed a "secret weapon" we believe a Rx to end all Rx, no details given, but with this will give a 2AT5/ARS tritron into 207 with 60 watts, has a 6V6 plate and screen modulating that input. 2UK very Q.R. doing a bit of unfortunate batching, his YF is ill, we hope she soon recovers. 2ON active on 40 and 80, and decent gear. 2VH active on 40, and 80, 2WV, 2WV active on 40 but not heard in Yarram. Eric Fisher, Jnr, soon to be one of the active Hams in Wulgong. 2ANW at Balgownie on 40 with good phone signals using Dynamic mike, commercial vintage. 2JQ active on 40, has a new car and plenty of work. 2ALS has completely rehauled my rig using v.o.f. and 507 final, made pair 6V6s, all built into an AT6 frame, very compact. 2GU heard

working 2AIIA but duty called Arch had to "gallop" (to coin a popular phrase of 2WH). Congrats to Trevor 2NB and his YF, heard from many stations during their honeymoon. 2QA "The Voice of Nymby" was heard from stations far removed during the holiday. Wieland, Wieland, Yarram the month included 2MN, 2HT, 2AKN, and 2TH.

VICTORIA

A.O.C.P. CLASS

The Mornington Peninsula Sub-Branch of the Eastern Zone of the W.I.A. located at the Army Signals School, Balcombe Camp, is commanding a class for those desirous on the Mornington Peninsula of obtaining an A.O.C.P. license.

It is intended to bring students gradually up to the standard with these more rigorous regulations that will enable them to pass the P.M.G. examinations. Prospective students are asked to contact Lieut. Wright at the Army Signals School at Balcombe for further details. Commencing date for the class is 9th May at 7 p.m. in the Club Room at the School.

SOUTH WESTERN ZONE CONVENTION

Saturday and Sunday, 2nd and 3rd May, the chaps of the South Western Zone held their Convention at Colac. Around the tables at dinner one could see 2BE, 2ASV, 2BI, 2II, 2AOI, 2AKN, 2AKR, 2PS, 2BU, 2CQ, 2EQ, 2ZU, 2IC, 2HQ, 2KZ, 2AKL, 2ADK, 2APG, 2GY, 2WT, 3D, 2EB, 2BV, 2BZ, 2U7, 2LZ, 2JG, 2WV, 2IK, 2TM, 2AML; others present were B. Sadler, C. Charnside, E. Gliddings, D. Brook, R. Stokes, and R. Carter.

Saturday afternoon the chaps rolled into the sheds where they arrived in Colac, Sunday morning had a look over the broadcast station 2CB and I heard some new ideas for their new rigs. From what I hear all enjoyed themselves, and thanks go for the good job the Colac gang did.

Heard that 2VA is after an AR8 receiver when he goes to Sydney. 2WV is using 2HW as a beam gun. Latest is that Bob has folded his dipole on 20 with good results, what about the gentleman's band Bob, no hear.

Hear that an eye bug has struck Ballarat as 2BI and 2ASV were in dry dock (bed) with eye trouble, looking where they shouldn't. Some good news from Ballarat gang is that 2PP works 19 and



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See also Outstanding Offer Page 2

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20 with many DX contacts, while SAPA only works on 20 with 1000 countries up with four wave beams and 100 watts to p.p. 80%.

3ADL (ex-9BM) building with p.p. 507s 100 watts and Bruce's receiver is still in 9BM hand, so 3ADL is still active. 3BWB has a new QTH at Hawthorn, but Don cannot come on the air as XYL has his note to grindstone doing domestic work, bad show. 3SAU works 80 and 40 when not on 144 Mc. 3BUE still finds time for QSO on 40. 3AUP has a new v.t.o. 100 watt rig all bands. 3AUP's primary trouble is that OR now, while 3AAT has fine signals.

3IO has 3B#4 receiver, and 3BW on 40 c.w. with Type A Mark III. Neil has a 504 receiver, not a 640, sorry Neil for mistake. 3ZU had holdings with 108 with good results. 3SC came to see your scruffy 3UT and 3ZU when holding at Warrnambool.

3BU worked 3TO and 3ABA on 144 Mc. recently. 3BW also active on this band. 3BW was also operating on 40 metres using a Type A Mark III. 3BV on 80 metres with AT5, working 3BU and 3ALD on 7th April.

FAR NORTH WESTERN ZONE

It was decided to start weekly code practice classes at a meeting of the above zone, held on 1st April, 1949. Attendance was good. 3GZ, 3FC, 3T1, 3ACY, 3MF, 3AGF and Associates Herr Walker, Alex Smith, Jim Pownall and Kel Stanfield being present. Kel Stanfield received a telegram from 3NGV. Weekly code practice starts on Wednesday, 6th April, with 3FC poundin' it into them.

Zone President, 3GZ, who attended the State Convention, gave an interesting summing up of proceedings on both days, also the night at Harry King's.

New ham 3ACZ (Bay) had a sorry tale to tell of a fractured rock. We all hope the T9 note will be caused on the soonest basis. Associate Jim Power caused a few eyebrows to be raised and evoked a lot of interest when he announced that he had a huge band-switched double conversion receiver he has designed. Reckons he has a big pile of coils and a five band switch so the soldering iron will run hot with a vengeance. Meeting closed at 10 p.m. when most of the boys had a look over 3MF's shack which was being packed by 3GZ.

3GZ has f.b. final completed, 850 very solid job; should be bending a few S meter needles 'ere you read this. 3FO has the Type 3 Mark II, at SMF's QTH and gets choice DX bits on 40, ah that's it! When are we to come out and tell those things?

3T1 very busy man these days, re-build no further on, did you lose heart when the pole went over in recent storm? Expect some 50 Mc. activity from 3AUQ when harvest work ceases, nice receiver. 3SC made good progress on 80, training on 40, looking for larger and better reports when summer pole goes up. 3GZ inactive, just having bough in hospital where he was with the old tonsils, all our sympathies Tom; we wish you a speedy return to the DX. 3APC is proud, so proud of recently arrived 1st harmonic; let's hear that phone Fred.

WESTERN ZONE

Two pleasant surprises turned up during the month. First a nice long letter from 3FL, and later when we saw Ray himself, he was still building in the Gramophone shack. He is pleased they his FS6 got out over the rocks. Ray tells me 3TA is busy moving into a new home and as soon as the new shack is built, a 50 ft. tower erected, and four element beam installed on top. Byron will be back on the air again. Byron had no interfering timepiece. 3TA's old shack about 20 metres apart and the 40 ft. telephone pole down to earth, however the job was done and the old three element now reposes in 3FL's shack.

Claude of 3OD is Horsham's mystery man, but mystery not solved, does good work on 50 Mc. and now has a full State. He is at present busy constructing 144 Mc. gear.

Len of 3AV is hampered by boarding house limitations and that base of country Hams, d.c. surely, however he amuses himself on crystal grills and 3APC says it takes it like a kid, 80% to self-oscillation. A new member in Horsham is Alan Walter and when last seen was hurrying home from a holiday with a car load of wife and disposals gear; all of a dither to tear it apart. 3FL has also been busy adding a 4th harmonic to the new 100 w. rig. The Class A 807 modulators at present are a little jumpy, but as Ray says some extra shielding round about will do the trick.

Our last zone hook-up we were pleased to have 3KAW to see us for the first time. Watty was new Ham and presents a very nice start indeed. 3AKW is building himself v.t.o. and hopes to have it going soon. Bill is also putting a switch on the p.a. 3ARM has at long last lost his almost

perpetual Sunday morning QRM. Bob was on the verge of buying a new crystal to miss it too.

3EP now has some competition as 3AWH is only about 200 yards away, so Ted will have to sharpen up the old receiver and have a word with his neighbour. For the benefit of a VK5 net 3YW rubbed a few ke. off his crystal so if I now clutter up another net it can't be helped; but whatever happens chaps, if you can make it don't forget the zone hook-up Second Sunday in Month on approximately 7120 Mc.

EASTERN ZONE

The main topic of conversation in the zone this month has been the forthcoming portable contest, and it seems as though a good percentage will be going portable. 3SS and 3ZU have been out with all mod cons for camping over the week-end. The grilled steaks make one's mouth water at the thought of them. 3PR will be running the highest power, 20 watts to his Type 3 Mark II. The majority expect to operate with an input of between 10 and 20 watts. It is to be hoped that the weather decides to treat us kindly.

Our President, 3PR, has the u.c. on at last, and is now talking in terms of a three-stage 50 watt rig. 3DI at Leongatha reported a drop in his voltage when he was in the hills on 31 March, so he is expecting his new car any day, and has neglected his favourite hobby whilst fixing up a garage worthy of the object it is to house. 3SS gleefully reported receipt of a new light utility bus, and informed anxious members that he will be keeping the old one. 3AEK is apparently thinking in terms of a new car also—will be taking a back seat with quite a few of the zone.

3WE hasn't been doing so well with his calling in lately. There have been a few absences in the hood up, 3ACU has been having picking up, so to make up operations 3VU/1S has also been busy picking, and clearing the block of trees not needed for the antenna farm, so have not done any ear-bushing except for the usual shed with 3DI, and a nighty skid with 3WEN. 3CI was very nearly about to skid with 3WEN. 3CI is very much about his shack and has put it up. The new 3DZ on 20 for the month of April between 3CI and 3VU. 3LV is not on the air much—saving petrol on the holidays. 3QZ, contrary to expectations, is going to Metung for Easter, instead of spending the holidays on the estate. He plans to have a rig up in his shack at Metung. Hooray Graham! 3QZ finds 10 metres DX keeps him fully occupied. He is after DX C.C. twice over. 3T1 is operating from his new shack, and finds it much more convenient.

3T1's new shack. Sub-Branch—This sub-branch of the Eastern Zone of the W.L.A. have decided to hold a Field Day on 29th May (Sunday) to celebrate the first year of operation of the sub-branch at Balcombe Camp. The arrangements for the day include: Picnic lunch, bring your own;

Field Day on 3.5, 7, 50 Mc. and upwards; Hidden Transmitter Hunt on 7 Mc. band; Buffet Tea; good prizes will be given for various sections of the day's activities.

A special invitation is extended to all members of the Institute to come along and join in with the gong on the Mornington Peninsula. Members who have portable gear are especially asked to bring along their gear and have a chance of winning a prize. The location of the Field Day is the Army Signals School at Balcombe Camp. This day's meeting promises to be a good one, so come along and join in the fun. 3KT or 3RR would like to hear from those who will be attending, so that catering arrangements can be finalised.

NORTH EASTERN ZONE

3UI has built a new modulator and DX has been better since. 3APF still getting out on ten and now has new 100 watt going on six. 3ACK built himself a big one and on his own driving home from the Observatory 3UI had a 100 watt portable DX 40 and 20 metre c.w. 3TS has had a holiday trip to VK2, 3GD doing well on ten phone now. 3VY is still very ill, and in hospital. JACW is building for ten. 3ABG burns second genemotor out.

QUEENSLAND

The general meeting for the Queensland Division met on the 25th March in the Elizabeth Street Room. In the absence of the President the chair was occupied by 3KX. Attendance was poor on account of the wet weather. The Agenda Paper for the Federal Convention was discussed and the delegate, 4ZU, was given the necessary instructions.

Copies of the VK5 Constitution are being made and each female member of this Division will receive his copy in the near future. Membership Certificates have arrived and provided the President does not break down with writer's cramp, all members should have received their certificate long before these notes are published. At the present time approximately fifty per cent. of the licensed Hams in VK4 are members of the Society, and approximately fifty per cent. are country members.

Arrangements have been made for instruction for our students in theory and c.w. Transmission of more practice will be made over 4WI on a frequency of 7.5 Mc. at 7.30 p.m. on Tuesdays. Students and Hams wishing to brush up on their code should listen to the Sunday morning broadcast of 4WI for further announcements.

Station manager 4FN announces that 4WI will be operating on 100 Kc. with s.s.c. in the immediate future and requests we be welcome.

At the present time 37 members are making good use of our circulating library. Once again we remind subscribers that books should be returned to the Librarian as soon as possible.

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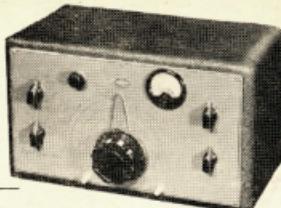
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M 1475-76-77

The following is a list of Council Members and their official positions in VK5 for 1949—President H. Austin (5AW); Vice-President F. Wreford (5DW); Treasurer G. Bowen (5XU); Secretary, E. Barber (5MD); Asst. Treasurer, R. Austin (5OA); Asst. Secretary, T. Leidler (5TL); Programme Organiser, R. Kelly (5LW); Disposal Manager, G. Ramsay (5GD); Membership Organiser, J. McRae (5JL); Representative, J. Paris (5PC); Publicity Officer, W. Parsons (5PS).

Now for the Mt. Gambier notes. 5CJ is in the throes of house furnishing and is beginning to wish that he had taken "up" cabinet making as a hobby! The a.c. mains are creeping slowly but surely up to 20 c.w. and he has just learned that the YF still thinks Ham Radio is OK. 5MS is now using a "T3" type aerial (I don't know whether the name has anything to do with the note). However it seems to be doing OK as lots of DX are coming their way. QSL with 5MS. He has also started hand control to his A.R.E. and automatic mod. control to his transmitter.

5XU has been trying himself out on 20 c.w. lately. Has also carried out a few modifications to No. 4 receiver. 5FD, as anticipated, is now in a.c. mode and he is getting a much higher voltage to the electrolytic capacitors. He claims that one well known make of electrolytic condenser is much better than the "bombs" we used to handle on the 5th November. Has been working on 40 and 20 metres while still building his new gear.

5CH has not had very much time for Ham Radio this month. Has been very busy at the "erg" (no relation to 5XU) factory as acting manager. Has kept the cobs from his gear on 20 and 40. He also has a very elaborate system of relays ready to go into the 5XU test bench for p.a. work. He claims he would like to tell all the v.h.f. experts that he has a crystal controlled transmitter on 6 and 2 metres, a beam on each band and also a good receiver on each band just waiting for some signals. 5TM still concentrating on 10 c.w. and 20 metres. 5JL has been working on 10 c.w. 40 phone soon. 5QJ has completely re-built the receiver incorporating bandswitching from 30 Mc. to 550 Kc.—now on 280 volt d.c. using 1625 in p.a. modulated by pair of 6V6s.

"Dorothy Dix" Parsons is still in business and I received a letter from "Harrased Parent" seeking my help to give his call sign and QTH which makes it all "one dinkey". "Harrased Parent" wants to know how he can stop his one year old baby from howling every time Daddy makes a move toward his shack to go on the air. Boy, oh boy, is this one right up my "Bones". Well, not with four-year-old, I'll say. If you start to then, then go and get a small hairbrush and gently stroke the little b—, sorry folks, stroke the little darling's hair very softly backwards and forwards in a soothin' motion. Should the little w— not stop within fifteen minutes, then reverse the hairbrush and the hairbrush and go to it. I never fail!

Although I am on holidays and determined to "leaf" and do no more work than I can help, these notes don't seem very representative of VK5 and I am puzzling my brains (or what passes for brains) as to what I can tell you dear readers. I could tell you what "Doc" Barber (5MD) said when he received a phone ring from an irate Associate Member who wanted to know where his receipt for payment of his membership fee had gone to (after all "Doc" had the letter 24 hours ago, but the Editor would print it anyway). I could tell you the real name of the operator who had a QO prefix named Bongo Bongo. Living in a light house in the Pacific (His job was to light the kerosene light at sundown, and blow it out at dawn), but I dare not; and I could even tell you why George Ramsay (5GD) only counts up to five when testing, but you wouldn't believe it, and last but not least, I could tell you what Ross Kelly (5LW) said when on his recent fishing trip to a (mythical) a single hole on a certain part of the coast of Rose, how it would burn the paper (and it was not "confound it"). So there you are, I have tried to think of something but it is no good, so the best thing I can say is, for the benefit of those who have just come in, please turn to the back page of March "Amateur Radio" and read, mark and inwardly, digest—YOU BEAUTI!

WESTERN AUSTRALIA

The March meeting was held on the 15th (third Tuesday). There were 41 members present, among whom were two newcomers, namely, 6L2 and 6KU. Congratulations were in order for Frank Taylor, son of present president of his A.O.C.P., and of course call sign coming up.

Our Secretary GAG, being in VK5 on business, 6KU took office. We also noticed that 6WH is our President for the coming year. 6RO was issuing receipts for the three local subs. March being the commencement of our financial year. All "non-members" please note!

6FC, our Emergency Network Officer, gave the good oil from communications with our local Wireless Branch, and we are now awaiting action of the P.M.G. to carry on with the organisation in conjunction with the emergency net, a field day contest has been proposed for Easter Saturday, 16th April. Great interest is being taken in the field day and it is hoped the weather will stay fine until after the date. By the time you read this, you will have had a go at VK5W for the net.

A Contest Committee was elected, to organise contests in VK5 and to make known all information of contests being organised throughout the world in which we can participate. 6N2, 6PL, 6CM, 6DW with other representative. Our Committee, whom their first work is our Easter Field Day. They will also be responsible for awards.

Both 6RU and 6KU voiced opinions relative to the Remembrance Day Contest, and our representative to the Convention, 6GM, is well briefed on the whole subject.

After the usual rag chew followed an informal discussion on "V.P.Os.—Their Use and Abuse" conducted by most members present. Quite a few words were aired and long pent-up passions exhaled as we now know. The other discussion, 6KU, "Picnics", 6QOs also came into the subject and with 6WH as M.C. we listened to an instructive and informative debate. 6GM was to have given a lecture—we don't know what it was to have been about—but he never had time to give it anyway. 6DW, a visitor from France, stuck around long enough to please to make many personal contacts with Perthis he had worked. The meeting closed at 10.30 p.m.

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PERSONALITIES

6J1 is developing a new Ham language. We hear "superficial" and "superficial" and wonder if Bill is looking for a new flat with all mod cons! Also from Carlisle comes 6YZ who plays trains on the 7 Mc. truck. Did it run over the mile lead Dick? What about 6RS with his VFO/NBFM/MQ? (anagram for GEL).

6LW has his rig on 7 Mc. again. That's a big jump from 50 Mc. Wal. What's that Grace and Wally—6WG—still doing their share on 30 Mc. Have you heard that the ZLs and ZSs have their beams on you two in Albany? 6MG was the only VK6 on the air during the Pylon broadcast. He's been back all to himself. 6CD was pleased to contact a ZL on 7 Mc. the other week-end. Should be more of it Dom!

6NW, with his "Clapp" oscillator as v.f.o. is seeing some. What's the DX zone? 6WV is now. 6WV put out one signal after all these years. We hear that Bill has 100 watts locked up in the cupboard—what about turning 'em loose Bill? 6WS very active on all bands lately. We know Skipper has a good site for the next 6WV. 6WV has been active on the 14 Mc. portion of the S.W. with Mrs. DX. It was about time you collected those QSLs Bill. Did you get one from 6WV?

6AH is coming back to life again. Good show went up about 6MB too. Alan likes the lack of local QRM. 6BC breaks through to some nice DX on 14 Mc. Doesn't happen often enough does it Bert? 6MW has promised us bigger and better gear. It's about time Bill got back to us. 6WV came down to Albany and Perth for a holiday. As soon as Ray gets home we have a stack of new countries—wonders what he has missed being away.

6IG is on 7 Mc. seeking respite from DX. Peter has a v.t.o. on the way now. 6TJ in his new home at Bowden has his rig up and the airwaves as soon as the lawns are laid, etc., etc. Notice that 6MB has joined the regulars on 28 Mc. now that the South Americans are breaking through. 6LL permanently on 28 Mc. lately—what about getting a v.t.o. going Charlie? 6PR is finding a little time for Ham Radio these days. 6WB had a very large amount of signal on 7 Mc. 7.1 Mc. the other day. Guess I need a new receiver Harry? 6EL scoring some nice DX on 24 Mc. How's the Pomeratiusburg situation Ed? What about 6CN in the band? Also hear that the DX coming back to 6HM, Chas has his DX while 6K is away, OK?

6KE hooked an aircraft in flight. That's a good effort Keith, but how? 6GD has been collecting European DX on 28 Mc. 6GD also getting a share on that band. 6KU didn't like being top of the list last month so its "bottoms-up" this time Ray!

TASMANIA

The April general meeting was held as usual in the Royal Photographic Society Room (sounds posh doesn't it). Only about 20 members were present, which is a poor show, considering there was so much business in the shape of the Federal Constitution Agreement to be discussed. What about it chaps, the Committee desires your thoughts and ideas on these matters too!

Our worthy President 7LJ and 7XA told us of a publicity stunt that had been conducted through the courtesy of a commercial station 7HO (I think 7HO had a band in it). They replied when asked if they had the "right" to do this. Nice work Charlie and Louie just the stuff to give the troops. Methinks we could do a lot more on these lines and so build up a bigger and better Division.

On Sunday, 10th April, we held a Field Day and it took the usual form of a d.h. hunt. Yours truly was in charge of the transmitter (the only hope I had was that the 100 watts would be enough) and was assisted by Barney Watson, Len Jensen 7LJ, and then Crosby 7CW.

The transmitter was situated at Howrah, only about eight miles from the starting point, but even at that it was a very creditable effort Barney! I think the 100 watts were sufficient. I think I think it is about time we introduce a handicap system, possibly weight of man for age (of car) and then I might get a go myself.

Hear that newcomer 7KA is frantically building his rig and in the meantime can be heard occasionally on 7 Mc. in a Type A. Mark III. Nice going Ed. Hear the new rig is an example of HOW a rig should be built!

Saw young Brian Hall in camp with the Citizen Army the other day, having a whale of a time with a 128 set. Brian has passed the A.O.C.P. but I don't know what the hold-up is now. How about it Brian—since you were on the air!

Sleepily turning the dial over the 14 Mc. band a few evenings ago, I heard 7SK calling CQ—not QDX CQ—I don't know who was more surprised, Max, myself or the 0Z7 that came back and gave him 5-7. Nice work Max out of the blue, that one, for a phone contact.

I have very much pleasure in reporting that 7SK won the phone section of the National Field Day Contest. A very creditable performance for a 14 Mc. band. Max had been on the air for 30 days prior to the Contest. The rig used was finished only a few hours before starting time, it consisted of two No. 19 generators for the power supply, the two 500 volt windings in parallel for the p.a. and 1250 volt tapping for the exciter. The latter for the modulator, a 12Z7 with a 6WV buffer, a 6WV doubler, and a 16Z5 in the final, comprised the transmitter, whilst the modulators were a pair of 807s with the usual speech line-up, plus a dynamic mike.

The whole "caboodle" as Max called it, had an input of 6.5 watts, from two 6 volt batteries, fed into a v.e. beam, via a random length of twisted pair feed. The antenna was a 120 foot tall mast of 8d 12s, had 120 foot legs, 55 feet high, spread at 80 degrees. The station was located in an apricot orchard at Howdown and it is rumoured that certain people won't eat apricots again. That's all for now OMs, don't forget to let me have your news and views you would like to see published.

NORTHERN ZONE

The usual monthly meeting of the zone was held at the Willies' C.R.C. room on Friday, 8th April. There was a large attendance of members and the evening was taken up with a discussion on the agenda paper for the Annual Federal Convention.

Most of our members have been very inactive during the last month, this was possibly due to the poor conditions on the bands. Even the 144 Mc. operators have been very quiet, the exception being 6LW with his 12Z7 with a 6WV buffer, a crystal controlled rig which is performing admirably with output and quality comparable to Len's 7 Mc. transmitters.

DX has appeared to me to have been very poor, however 7KB informed me that conditions on 14 Mc. have been excellent for the African continent from 0100 hours onwards. Ian has worked many

countries on the dark continent that I haven't even considered as possible, even in my wildest dreams.

According to previous years Central and South American stations should have been heard through during the evenings of February, March, April, however it has only been lately that this direction has been audible on an evening at all and during the past week XE8, EP4s, TIs, CMs, PYs, LCs, and FV1, 6WV, 6WZ, 6WZs have been heard in good strength. Best QSOs I have had were FV4TB, who worked quite a few VKs on the evening of 11th April on 14010 Mc. Kc., and KS4AJ on 14.1 Mc. at 2100 hours.

On phone VK1AIDS has been a good contact and was worth the battle to these managing to get through the din. Incidentally, Ron informed me that in future he will not answer anyone within 10 Mc. of his frequency.

28 Mc. has been very patchy with the ZLs appearing to get more and more. European stations have had a fairly good of an evening up till approximately 10 p.m. and towards the end of March the Africans came through one Saturday afternoon and gave 7RK some good phone QSOs. That weekend Ray worked five continents on 28 Mc. phone.

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FIFTY AND UP

VICTORIA

50 Mc.—There has been more activity on the 50 Mc. band this month than last, mainly due to interest being shown in 576 Mc. and practically every night stations are to be heard carrying out cross band tests. Some sporadic openings have also helped to keep the band busy. The first was on the 16th of March at 2120 when VK2HZ was heard by several stations at 89 but no contacts were made. Next, between 2000 and 2100 on the 21st, the VK5s made a surprise appearance. VK3TH, VK3L, VK3K, VK3M, VK3N, VK3P, VK3DI in Leongatha worked VK3HR, 576, 578, 579, 580 and several Melbourne stations had contacts with the VK5s. The next night VK4HR was heard for a short time, while on the evening of the 23rd the VK5s again came through, although this time sightings were not good and no contacts were made. After these sporadic openings there was a lull until the 3rd of April when VK3DA heard 2HO working a VK7 at 2100.

SU1 at Tatura is on the band every Saturday evening looking for (and contacting) Melbourne stations. SAPC has been on the band and has a new rig and has worked 3ACL in Hill with good signals. 3HZ has his gear going but lacks a suitable antenna at the time of writing.

144 Mc.—There is not much to report this month mainly due to a drop in activity on the band, the reason for which is hard to see since so many chaps have gear for the band. How about getting on with it more often?

Two stations have appeared on the band. The first is 3PG, who is using a 6A6 c.e. and doubler with an 8 Mc. crystal, 6L6 tripler, RRS4 tripler, and S15 final with 40 watt input. The converter uses a 6AG5 r.f. stage and 6J6 mixer and oscillator. Albert has not had time to put up

an outdoor antenna yet, but judging by his signal from an indoor dipole he should be one of the leaders on the band. The second is SABA, who has a 522 transmitter, a modified 522 receiver section, and a dipole 26 feet high. Ray is putting out a good signal and has materials on hand for a stacked beam.

SLH has constructed a 24 element beam (12 driven elements and 12 reflectors) and has been busy tuning it up for maximum results. He has not had it on the air yet, stations near by are reported to be replacing their aerial coils with ones wound with 8 gauge wire.

SABA and 3YS have their new 50 and 144 Mc. rig with an 829B final working now. They run 90 watts since they have finished their new modulator and class B 12000. According to say they have a signal worthy of such a rig.

SAKC has new receiver called BL4 and it's not from what Ed tell the boys on 144. He is putting up a new 16 element rotary beam on top of a 70 ft. stick. Other day SAKC worked 3ALG, 3BZ, and 3EY with S2 to S9 signals. S2C worked 3SW, this is 144 Mc. and has a distance of 85 miles. 3VF worked 3ARC and 3ED with good signal reports both ways. SEQ has started on 144 Mc. also 3ZU and 3UT will be on that band soon looking for contacts, also heard that SAKR is interested in 144 Mc. also.

576 Mc.—This band has been receiving a great deal of attention in Melbourne. Not many contacts are being made yet, but many chaps are busy building gear for this frequency.

3NW has re-built his gear to a more satisfactory form. He now uses push-pull R1128 with plate and cathode lines for the transmitter and a super-regen receiver using a 2C43 lighthouse tube, which seems to be very sensitive. The gear is built with

portable operation in mind and some interesting tests should be carried out. SIM has heard SWN from his home location using an AM receiver, kindly loaned by Len Allen. Signals were R30, S4 on 144 Mc. and R30 on 283 Mc. A dipole one at 3 kW is in a hollow and there are several high hills in between.

SMD has been carrying out tests with a transceiver using a 955 with half wave lines, but has not had a great deal of success to date. 3RR has come up with a converter using a 955 with a coaxial line circuit and a 955 oscillator. The output is on 144 Mc. and is fed into an ASV receiver. Dick has been able to hear 3XA but has not finished adjusting it at the time of writing. SCR is building a somewhat similar converter but using a 929 mixer and a 954 oscillator, using local harmonic injection. (It appears that this gear would be the basis for some good technical articles—Editor.)

3XA has tried a converter using a 636 push-pull mixer and 636 oscillator with fairly good results. However the grid line in the mixer was not strong enough to drive the 955 mixer, so he has had to use a GL1446A rf stage, 955 mixer with coaxial line grid circuit, and a 955 oscillator. The local oscillator is fed into the 955. Does hopes to have this set up working for the May v.h.f. group meeting.

3EH is also building a transmitter using RL18s and will probably use a converter for receiving. 3DR has a receiver of the type using GL1446As as rf stage, mixer, and oscillator, which he is adjusting for the band.

At the April v.h.f. group meeting John Belcher exhibited a crystal calibrator for 376 Mc. using EP50s multiplying from 4 Mc. crystals and an RL18 output stage. This will be available in the rooms for adjustment of receivers.

To help along the activity on the band and make sure that clubs do not have it away soon after getting their gear going, 3XA has made the very fine gesture of doubling a pair of 24Gcs as a prize for the May Mc. Contest. This will run from 30th June to 31st December inclusive. The score will be worked out by multiplying the number of contacts by total number of clubs worked. Only two way contacts on 576 Mc. count, and only one contact per day with anyone station is permissible, unless location has been changed.

QUEENSLAND

Very little activity is reported on 50 Mc. on the Gold Coast. March 1946 saw 3GU break 3PQ, whilst 4HR made contact with 3PQ, 4HD, 4PQ, heard 5PQ and 5MP, whilst 4TR worked 5MP, 4HD and 4LN keep regular checks on 50 Mc., whilst 4CU and 4EK keep their end up. Very little activity is reported from the Brisbane area.

On 144 Mc. the only activity reported is that 4ZK and 4PQ in Brisbane are holding Sunday night checks with 4PQ of Ipswich.

SOUTH AUSTRALIA

5RP using crystal on 44 Mc. with beam antenna. At present using super regen but has converter under way. 5LP also on the band but his sig does not appear to get down this way. 5OF has nice new crystal rig. 5PQ was recently at Kingaroy to work the game at Mt. Isa, but Max's rhombic just did not do the trick. 5GL still the mainstay of the band with his dual transmissions on 50 and 144 Mc. Wouldn't be surprised to find that it was triple transmission—heard making an attempt to get on 283 Mc.

5GR works crystal band. 5JN has a cross band. Claims can work more stations by this method. Can't copy the mod. oscillators on present set-up. Anyhow mod. oscillators have had their time on 144 Mc. 5NG has man-size beam on the beam end, trying to see how it works out. 5GY recently heard threatening to try 30 Mc. We can assure you, OM, there will be plenty of interest in the City, with beams lashed down NORTH (or thereabouts).

WESTERN AUSTRALIA

In spite of constant watch on the band in Perth by 6LW and 6FC, no DX broke through during 1945. Not with the Adelaide Radio Range audible, although Radio Busses, Queensland, and N.S.W. were often heard at various strengths. Some news from 6DW at Bruce Rock indicates that the band did open on 23rd March. At 1845 hours W.A.S.T., he heard two signals, and at 1850 worked 5ZT R30 S9 both ways. At 1900 he worked 5CR R30 S9 both ways, and at 1915 he worked 5LJ and then 5QR, R30 both ways. Then 6DW worked a VK2 working 6WG in Albany—then 6DW worked 6CR again. On this particular evening 6FC was at work, but 6LW heard nothing in Perth.

Have received no news from 6WG at Albany or 6HM Kalgoorlie. 6GS at Harvey still battling to get a 6 metre signal into Perth. He can read signals from Perth up to S5 on phone. The same remarks apply to 6DW at Bruce Rock.

Editor "A.R." Sir.

"Canaille" appears to consider lack of erudition a prime virtue, and coupled with his statement that "the average amateur is not fit to be an Amateur Radio, savours of a mental outlook as archaic as it is difficult to reconcile with his avowed ideals of a modern and exacting science."

His assumption that "Old Hombre" is a critical, exacting, and exacting scientist with a twinge of humour can hardly be based on the article in question, which (to the erudite) shows a sense of humour, is constructive and well written, and certainly not intolerant. "Canaille" might ponder on the thought that there is a vast difference between "old fashioned" and "being unable to suffer fools gladly."

To say that education is a curse to many, is merely repeating some worn out cliché that has become as rank as a rubber receiver. But even this activity has been brought to a sudden halt by Bill succumbing to an attack of appendicitis. Tough luck Bill OM.

7XA, when last seen, was wrestling with numerous fearsome looking pieces of iron which he swears, when assembled, will make up the rotating mechanism for a ten metre beam. Apparently those nice shiny new little bits and pieces of v.h.f. equipment were reported to the 7XA shelf, will have to stay there for the time being.

With skin on one hand and 7193s in the other, both 7LJ and 7BZ are contemplating building simple equipment for 144 Mc. There must be lots of the gang with similar ideas, who are only waiting for someone to start the ball rolling. What about it? There's a need for a band to work an event or so work with the soldering iron, a strip of wire on the roof to erect the dipole, and we have something to listen to in these vast empty megacycles of space.

Northern Zone—7BQ is now using a crystal rig on 144 Mc. with an S15 in the final, still wants some more drive. He is also still playing with converters. 7NL has been trading generators for 900s, as well as having his own 900. 7TE is not very active, but building an I.F. strip receiver, whilst 7DB has got his super working at last to his satisfaction. 7MC is out of commission. What about it? Ernie?

Got it from a roundabout source that 7AM is building a crystal rig for 144 Mc. Has not been on for some time now, must be five months. Les Peter with him has been working on the 144 Mc. receiver still, and can now hear signals on 121 Mc., S5 at 52 miles. Also has added an S meter and planning to add an r.f. stage and h.f.o. for DX. Is also planning to put up a fixed beam on Melbourne in the hope of a break through to VK3 next month. There is no activity on 50 Mc. now, the entire lot being on 144 Mc.

CORRESPONDENCE

SUPPORT FOR "OLD HOMBRE"

Editor "A.R." Sir, St. Luke's Rectory, Mosman, N.S.W.

"Canaille" is referring to "Old Hombre" as intolerant enough not to go by without some protest. Surely to infer that a man is intolerant for championing the cause of correct diction, is equivalent to inferring that the traffic laws are intolerant, where they punish a man for a traffic breach. The use of such expressions as "old fashioned", "I've just come in, I've just did it, I do it", and so on, is one of the ugliest things present on any phone band. Furthermore, it is something that can be avoided, with a little care and observation. That is to say, it is not obvious, if the person concerned was to open the shrivelled up the key or to write it down on paper. In the majority of cases the correct grammar would be used.

The use of correct English speech does not depend on high standard of education, as "Canaille" suggests. It is the observation of the speech and writing habits of the community combined with the knowledge provided freely by the public education systems, to all and sundry up to the age of 15 years.

Any amateur who has sufficient knowledge to gain his licence, yet who is satisfied with sloppiness, has every cause to be thoroughly ashamed of himself, both on the air and off.

—G. E. CAMERON, VK2GC.

His assumption that "Old Hombre" is a critical, exacting, and exacting scientist with a twinge of humour can hardly be based on the article in question, which (to the erudite) shows a sense of humour, is constructive and well written, and certainly not intolerant. "Canaille" might ponder on the thought that there is a vast difference between "old fashioned" and "being unable to suffer fools gladly."

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A few hours spent in pursuit of that knowledge would eventually pay the student and Amateur Radio generally far more handsome dividends than a backyard full of beans.

In other words, "Canaille," what about growing up?

—"ARISTO."

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NEW SOUTH WALES:

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Pty. Ltd.

QUEENSLAND:

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J. Michaelmore & Co.,
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SOUTH AUSTRALIA:
Gerrard & Goodman,
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Ltd.

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J.H. MAGRATH & C°

The Radio Enthusiasts Supply Store!

Hook-up Wire

Nylex plastic Hook-up wire. Per yard 2d. Plus 10% Tax. Olympic cotton push back Hook-up wire. Per yard, 5d, plus 10% Tax. Available in assorted colours.

Acorn Sockets

AEGIS ceramic Acorn Sockets. Price 2/9 plus 10% Tax.

University Meters



The full range of University Meters includes 2" round, 3" round and 4" round. Available for PROMPT DELIVERY. Prices range from 55/-, plus 10% Tax.

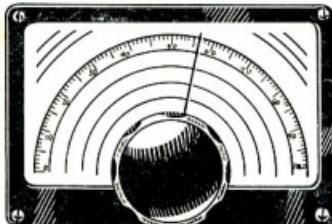
Miniature Stand-off Insulators



A midget insulator made from Frequentite with N.P. brass parts. A useful accessory in the design of ultra short wave receivers and transmitters. The new quality Frequentite closely approaches quartz in its characteristics at a low loss dielectric at high frequencies.

Bezels

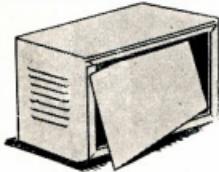
Reds and Green complete with lamp holder. Priced at 2/6 ea. Plus 10% Tax.



Full Vision Dial

A most useful dial for all types of receivers, test oscillators and similar equipment. The dial escutcheon measures 6" long by 4 1/8" wide. The scale is 5" across. The outer scale is marked 0-100 degrees and three other scale lines are provided for the user to mark in his own calibrations as desired. Two spare printed scales are supplied with each dial. A large fluted instrument knob is fitted. The drive mechanism has a reduction ratio of 10-1, is free from backlash and has a beautifully smooth movement.

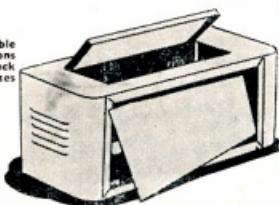
Metal Cabinets



Cabinet XX. Suitable for communications receivers. Black wrinkle finish. Sizes 15 x 7 x 8.

37/6

Plus 10% Tax



Cabinet 11" x 7" x 5 1/2" with panel . . . black or grey wrinkle finish.

25/-

Plus 10% Tax

We specialize in all types of sheet metal and aluminium chassis, boxes, cabinets, etc.

R.F. Transmission Line Telcon

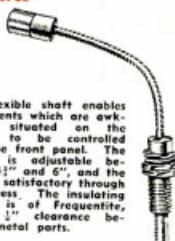
300 ohm 100 yd. length 3d. yard.
150 ohm 100 yd. lengths 6d. yard.
75 ohm 100 yd. lengths 6d. yard.
Plus 10% Tax. Additional cost of 1d.
per yard is charged for cut lengths.

Micro Condensers



60 PF single section with provision for screwdriver adjustment instead of extended spindle. Mounting pillars supplied. Air gap .020".

Flexible Driving Shafts



This flexible shaft enables components which are awkwardly situated on the chassis to be controlled from the front panel. The length is adjustable between 4 1/2 and 6 1/2 and the drive is satisfactory through 45 degrees. The insulating portion is of Frequentite, giving 1" clearance between metal parts.

New Octal Socket

Standard Moulding 6d. each, mica filled, 9d. each plus 10% tax.

J.H. MAGRATH & C°

208 Lt. Lonsdale Street, Melbourne.

Phones—Cent. 3688 - 4414